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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,340	05/09/2001	Barry Bronson	10006196-1	3032

EXAMINER	
NGUYEN, KIMNHUNG T	

ART UNIT	PAPER NUMBER
2674	5

7590 01/02/2004

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

DATE MAILED: 01/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/851,340	BRONSON, BARRY	
	Examiner	Art Unit	
	Kimnhung Nguyen	2674	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 June 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

This Application has been examined. The claims 1-21 are pending. The examination results are as following.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tabata (US patent 5,579,026) in view of Deering (US 2002/0015052).

Regarding claim 13, Tabata discloses a method of displaying images using a wearable display. However, Tabata does not disclose an amount of distortion for image signal data, the distortion acting to distort a source image; and adjusting the image signal data. Deering discloses a graphic s system configured to perform distortion correction having the pixel computation are selected to compensate for image distortions by a display device (see abstract); and adjusting the image signal data (see abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the pixel computation are selected to compensate for image distortions by a display device and adjusting the image data as taught by Deering into the wearable display of Tabata because this would be corrected by appropriately scaling pixel values prior to transmission to display devices (see abstract).

3. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tabata (US patent 5,579,026 cited by Applicant) in view of Green (US patent 5,124,659) and in view of Deering (US 2002/0015052) and inview of Garlick et al. (US patent 6,614,448)

Regarding claims 1-12,Tabata discloses in figure 1-2 that a method of displaying images using a wearable display device comprising a controller (11) operable coupled to the display, wherein the controller obtains image signal data from source image and generates a display (21L, 22L) signal for display by the display; and optics (left, right eyes of the user or optical system, see column 2, lines 11-16), the controller comprising a processor operable coupled the image source (figure 13, column 10, lines 9-24), the system having an adjusting in the image signal (see column 2, lines 43-49). However, Tabata does not discloses that the display comprising an inner region, an outer region; and determining a brightness from the inner region display signal; wherein the outer region is substantially lower resolution than inner region; and outer region of less than 5 cycles per degree resolution, or the inner region of at least 15 cycle per degree resolution, and ratio between an inner region and an edge of the source image of between 2:1 and 20:1.

Green discloses in figure 1 that pixel of a display device comprising an inner and outer regions (I, IV), and having a brightness from inner or outer region (see column 3, lines 6-11). Garlick et al. disclose a graphic processor displays pixels in an image at non-uniform resolution by using a lower resolution and high resolution signal are used directly (see abstract). It would have been obvious to one of ordinary skill in the art at the

time the invention was made to implement the teachings of using the regions and lower resolution and high resolution as taught by Green and Garlick et al. into the display system of Tabata because this would provide the range of the levels to be achieved by appropriate selection of areas.

From the claims 3-4, 9-10, it would have been obvious to one of ordinary skill in the art at the time the invention to have an outer region of less than 5 cycles per degree resolution, or the inner region of at least 15 cycle per degree resolution, and ratio between an inner region and an edge of the source image of between 2:1 and 20:1. as claimed since such a modification would have involved a mere change in range/shape of the levels. A change in range/shape is generally recognized as being within the level of ordinary skill in the art.

See In re Rose, 105 USPQ (CCPA 1995) and

See In re Reven, 156 USPQ 679 (CCPA 1968).

4. Claims 14-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tabata (US patent 5,579,026 cited by Applicant) in view of Green (US patent 5,124,659) and in view of Deering (US 2002/0015052).

Regarding claims 14-21, Tabata discloses in figure 1-2 that a method of displaying images using a wearable display device comprising a controller (11) operable coupled to the display, wherein the controller obtains image signal data from source image and generates a display (21L, 22L) signal for display by the display; and optics (left, right eyes of the user or optical system, see column 2, lines 11-16), the controller comprising a processor operable coupled the image source (figure 13, column 10, lines 9-24). Green

discloses outer and inner region. Deering discloses the image distortions as discussed above. However, They do not disclose wherein the distortion ratio between an inner region and an edge of the source image is between 2:1 and 20:1.

From the claims above, it would have been obvious to one of ordinary skill in the art at the time the invention to have an the distortion ratio between an inner region and an edge of the source image is between 2:1 and 20:1 as claimed since such a modification would have involved a mere change in range/shape of the levels. A change in range/shape is generally recognized as being within the level of ordinary skill in the art.

See In re Rose, 105 USPQ (CCPA 1995) and

See In re Reven, 156 USPQ 679 (CCPA 1968).

Response To arguments

5. Applicant's argument filed on 6-23-03 has been fully considered but they are not persuasive in view of new ground rejection.

Applicant argues that Tabata and Green do not disclose an inner region and an outer region of substantially lower resolution than inner region, and determining an amount of distortion for image signal data. However, this arguments is not persuasive due to the teachings of combination of Tabata, Green, Garlick et al. and Deering as discussed above.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimnhung Nguyen whose telephone number (703) 308-0425.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **RICHARD A HJERPE** can be reached on **(703) 305-4709.**

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D. C. 20231

Or faxed to:

(703) 872-9314 (for Technology Center 2600 only).

Hand-delivery response should be brought to: Crystal Park II, 2121 Crystal Drive, Arlington, VA Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Kimnhung Nguyen
December 23, 2003

RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600